

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

1. (Currently Amended) A method for identifying a compound which modulates an interaction between a first polypeptide and a second polypeptide comprising:

(a) providing an indicator composition comprising a cell cultured *in vitro* which composition comprises ~~contacting a cell having~~ a first polypeptide comprising a ~~binding portion of a~~ Kappa Recognition Component (KRC) KRC-polypeptide and a second polypeptide comprising a ~~binding portion of a~~ polypeptide selected from the group consisting of ~~of: Jun, GATA3, SMAD, and or Runx2 in the presence and the absence of a test compound; and~~

(b) contacting the indicator composition with each member of a library of test compounds; and

(c) determining the degree of interaction between the first and the second polypeptide in the presence and the absence of the test compound; selecting from the library of test compounds a compound of interest that modulates the ability of the first and the second polypeptide to interact as compared to an appropriate control,
to thereby identify a compound which modulates an interaction between a first and a second polypeptide.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein the second polypeptide is a SMAD2 polypeptide.

5. (Previously Presented) The method of claim 1, wherein the second polypeptide is a SMAD3 polypeptide.

6 (Canceled)

7. (Canceled)

8. (Previously Presented) The method of claim 1, wherein the cell is a yeast cell.

9. (Previously Presented) The method of claim 8, wherein determining the ability of the test compound to modulate the interaction of the first polypeptide and the second polypeptide comprises determining the ability of the compound to modulate growth of the yeast cell on nutritionally selective media.

10. (Previously Presented) The method of claim 8, wherein determining the ability of the test compound to modulate the interaction of the first polypeptide and the second polypeptide comprises determining the ability of the compound to modulate expression of a reporter gene in the yeast cell.

11. (Previously Presented) The method of claim 1, wherein determining the ability of the test compound to modulate the interaction of the first polypeptide and the second polypeptide comprises determining the ability of the test compound to modulate the coimmunoprecipitation of the first polypeptide and the second polypeptide.

12. (Previously Presented) The method of claim 1, wherein determining the ability of the test compound to modulate the interaction of the first polypeptide and the second polypeptide comprises determining the ability of the test compound to modulate signaling via a signal transduction pathway involving KRC in the cell.

13. (Currently Amended) The method of claim 1 or 55, further comprising determining the effect of the test compound identified as modulating the interaction between the first and second polypeptide on at least one biological activity selected from the group consisting of ~~claim 12, wherein at least one of~~ TGF β signaling, TNF α production, IL-2 production, AP-1 activity, Ras and Rac activity, actin polymerization, ubiquitination of AP-1, ubiquitination of TRAF, ubiquitination of Runx2, degradation of c-Jun, degradation of c-Fos, degradation of

SMAD, degradation of Runx2, degradation of GATA3, GATA3 expression, Th2 cell differentiation, Th2 cytokine production, IgA production, GL α transcription (Ig α chain germline transcription), and ~~and/or~~ osteocalcin gene transcription ~~is measured~~.

14. (Currently Amended) The method of claim 12, wherein determining the ability of the test compound to modulate signaling via a signal transduction pathway involving KRC comprises determining the ability of a test compound to modulate ubiquitination or degradation of c-fos, c-Jun, SMAD3, GATA3 or Runx2 ~~is measured~~.

15. (Currently Amended) The method of claim 12, wherein determining the ability of the test compound to modulate signaling via a signal transduction pathway involving KRC comprises determining the ability of a test compound to modulate AP-1, TRAF2 or Runx2 ubiquitination ~~is measured~~.

16. (Previously Presented) The method of claim 1, wherein the binding of first and second polypeptide is inhibited.

17. (Previously Presented) The method of claim 1, wherein the binding of first and second polypeptide is stimulated.

18.-54. (Canceled)

55. (New) A method for identifying a compound which modulates an interaction between a first polypeptide and a second polypeptide comprising:

(a) providing an indicator composition comprising a cell cultured *in vitro* which composition comprises a first polypeptide comprising a Kappa Recognition Component (KRC) polypeptide and a second polypeptide comprising a polypeptide selected from the group consisting of GATA3, SMAD, and Runx2

(b) contacting the indicator composition with each member of a library of test compounds;

(c) selecting from the library of test compounds a compound of interest that modulates the ability of the first and the second polypeptide to interact as compared to a control lacking

KRC, to thereby identify a compound which modulates an interaction between a first and a second polypeptide.

56. (New) The methods of claim 1 or 55, wherein the KRC polypeptide is encoded by the nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1.

57. (New) The method of claim 1 or 55, wherein the KRC polypeptide comprises the amino acid sequence of SEQ ID NO:2.

58. (New) The method of claim 1 or 55, wherein said indicator composition further comprises a c-Jun and/or a c-Fos polypeptide.

59. (New) The method of claim 1 or 55, wherein:
the indicator composition comprises a SMAD3 or a GATA3 polypeptide, and a reporter gene responsive to the KRC polypeptide; and
the effect of the test compound on the interaction of the polypeptides is determined by evaluating the expression of the reporter gene in the presence and absence of the test compound.

60. (New) The method of claim 1 or 55, wherein the cell has been engineered to express the KRC polypeptide by introducing into the cell an expression vector encoding the KRC polypeptide.

61. (New) The method of claim 1 or 55, further comprising determining the effect of the test compound identified as modulating the interaction between the first and second polypeptide on IL-4, IL-5, and/or IL-13 cytokine production.

62. (New) The method of claim 1 or 55, further comprising determining the effect of the test compound identified as modulating the interaction between the first and second polypeptide on IL-2 cytokine production.

63. (New) The method of claim 59, wherein the reporter gene is a GL α gene.

64. (New) The method of claim 59, wherein the reporter gene is a GATA3 gene.
65. (New) The method of claim 59, wherein the reporter gene is selected from the group consisting of genes that encode chloramphenicol acetyltransferase, beta-galactosidase, alkaline phosphatase, green fluorescent protein, and luciferase.
66. (New) The method of claim 1 or 55, wherein the cell is selected from the group consisting of: a T cell, a B cell, and a macrophage.
67. (New) The method of claim 1 or 55, wherein the cell is an osteoblast or osteoclast.